LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently Amended) A data packet multi-access communicating method comprising steps of:

receiving a transmission demand from each of a plurality of mobile stations at a base station;

determining a maximum transmission rate for each of a plurality of transmission channels for a next scheduled transmission time slot for each said mobile station calculated directly from values representing a radio wave propagation condition under which each said mobile station is presently situated, a data size associated with each said transmission demand, and a transmission error rate determined via a cyclic redundancy check (CRC) for each said mobile station, and determining a priority order of each said mobile station at said base station based on the radio wave propagation condition, the data size and the transmission error rate of each said mobile station; and

notifying each said mobile station of said maximum transmission rate of each of said plurality of transmission channels determined at said base station, each of said plurality of transmission channels having a separate maximum transmission rate calculated as each channel's full transmission rate capability , said plurality of transmission channels for each said mobile station forming a communication link between each said mobile station and said base station.

3. (Currently Amended) A data packet multi-access communicating method comprising steps of:

transmitting a data size and a utilization demand of a maximum rate to a base station for transmitting continuous data in large quantities from each of a plurality of mobile stations;

receiving said data size and said utilization demand from each said mobile station at said base station;

determining a maximum transmission rate for each of a plurality of transmission channels for a next scheduled transmission time slot for each said mobile station calculated directly from values representing a radio wave propagation condition under which each said mobile station is presently situated, said data size associated with said utilization demand for each said mobile station, and a transmission error rate determined via cyclic redundancy check (CRC) for each said mobile station;

determining a priority order of each said mobile station at said base station based on the radio wave propagation condition, the data size and the transmission error rate of each said mobile station;

notifying each said mobile station of said maximum transmission rate of each of said plurality of transmission channels determined at said base station, each of said plurality of transmission channels having a separate maximum transmission rate calculated as each channel's full transmission rate capability ~~, said plurality of transmission channels for each said mobile station forming a communication link between each said mobile station and said base station~~; and

variably changing a transmission rate according to said maximum transmission rate indicated by said base station in at each said mobile station.

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4. (Canceled)

5. (Currently Amended) A receiving and transmitting apparatus at a base station comprising:

a transmission condition detecting means for monitoring transmission condition of a

plurality of channels and determining quality of the transmission condition of each channel;

a transmission rate detecting means for detecting a transmission rate demanded by each

channel and its error rate;

a maximum rate control information determining means for determining a maximum

transmission rate for each of a plurality of transmission channels for a next scheduled

transmission time slot of each channel calculated directly from values representing results of said

transmission condition detecting means determination and said transmission rate detecting means

detecting, and an indication from an operation of other user; and

a notifying means for notifying each channel of the maximum transmission rate of said

each channel determined by the maximum rate control information determining means, said each

channel having a separate maximum transmission rate calculated as each channel's full

transmission rate capability , said plurality of transmission channels for each said mobile station

forming a communication link between each said mobile station and said base station.

6. (Canceled)

7. (Canceled)

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8. (Previously Presented) The receiving and transmitting apparatus at a base station according to claim 5, the receiving and transmitting apparatus including:

a demodulation device corresponding to a channel for demodulating a signal received on said channel through a transmitting and receiving antenna and a radio transmitting and receiving device, to which a plurality of channels are multiplexed;

a variable rate communication path decoding device for conducting communication path decoding processing in accordance with a transmission rate, including reconstruction and error correction decoding of a frame and matching of a transmission rate, from a received signal which is demodulated and is slotted to a radio signal transmission unit in said demodulation device;

a transmission condition detecting device for detecting radio wave propagation condition and transmission condition of each communication path, based on an output signal demodulated in said demodulation device;

a transmission rate detecting device for detecting a transmission rate of each channel and its error rate determined via cyclic redundancy check (CRC) for each channel, based on an output signal decoded in said variable rate communication path decoding device; and

a maximum rate control information determining device for determining maximum rate control information of each channel, based on an output signal detected by said transmission condition detecting device and transmission rate detecting device.

9. (Canceled)

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10. (Currently Amended) A data packet multi-access communicating method comprising steps of:

receiving a transmission demand from each of a plurality of mobile stations at a base station;

determining a maximum transmission rate for each of a plurality of transmission channels for a next scheduled transmission time slot for each said mobile stations calculated directly from values representing a radio wave propagation condition under which each said mobile station is presently situated, a transmission error rate determined via a cyclic redundancy check (CRC) for each said mobile station, and determining a priority order of each said mobile station at said base station based on the radio wave propagation condition and the transmission error rate; and

notifying each said mobile station of said maximum transmission rate of each of said plurality of transmission channels determined at said base station, each of said plurality of transmission channels having a separate maximum transmission rate calculated as each channel's full transmission rate capability ~~, said plurality of transmission channels for each said mobile station forming a communication link between each said mobile station and said base station~~.

11 –14. (Canceled)

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